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## **Goal: ENVIRONMENTAL PROTECTION AND ENHANCEMENT**

### ***Desired Community Condition(s)***

**Air, land and water systems protect health and safety.**

**Water resources are sustainably managed, conserved and protected to provide a long term supply and drought reserve.**

### **Program Strategy:ENVIRONMENTAL SERVICES**

56502

To protect the environment in the areas of landfills and groundwater.

**Department: ENVIRONMENTAL HEALTH**

### ***Service Activities***

Environmental Protection

Household Hazardous Waste Collection Center

### ***Strategy Purpose and Description***

Program Strategy's mission: Protection of the public health, safety and the environment through: landfill monitoring, characterization & remediation; regional groundwater monitoring & protection.  
Commonality of purpose ties its Service Activities together: Protection of the public health, safety and the environment.

Primary customers or clients of the Program Strategy: Property owners of land on or adjacent to former City landfills, those with work locations at and near former landfills, and the Balloon Fiesta RV Park users; current and future customers of the City's water utility.

Current state of customer conditions: Safety risks from explosive concentrations of methane offsite at former Los Angeles Landfill; groundwater contamination at former Los Angeles Landfill and other landfills.

Customer conditions being addressed: Los Angeles Landfill methane reduction; process is underway to hire a contractor to begin addressing groundwater contamination at the Los Angeles Landfill.

### ***Changes and Key Initiatives***

Los Angeles Landfill: Landfill gas extraction system continues to operate and control gas migration. Clifford Channel realignment is complete. Construction of groundwater remediation system is underway and will be operational in Spring 2005. Monitoring of site and surrounding areas continues at a high level of frequency. New initiatives going forward include rehabilitation of the RV Park utilities, regrading of the site, and landfill-gas-to-energy system installation and operation. Progress report submitted annually to the Administration and City Council.

Other Landfills: Phase I of study to characterize and assess landfill gas risk at former City landfills that EHD oversees is complete. Phase II is underway, including the following:  
monitoring wells have been installed at South Eubank, San Antonio, and Yale landfills. Migrating landfill gases detected at South Eubank and Yale landfills; monitoring well installation is underway at Nazareth, Coronado and Sacramento landfills; and options for a renewable energy system at South Eubank is underway, which would include landfill gas extraction/abatement components. Progress report is submitted to the Administration and City Council annually.

### ***Input Measure (\$000's)***

2001	110	110 GENERAL FUND	1,504
2002	110	110 GENERAL FUND	1,453
2003	110	110 GENERAL FUND	1,423
2004	110	110 GENERAL FUND	1,148
2005	110	110 GENERAL FUND	1,379
2006	110	110 GENERAL FUND	1,343

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<b>Strategy Outcome</b>	<b>Measure</b>	<b>Year</b>	<b>Project</b>	<b>Mid Year</b>	<b>Actual</b>	<b>Notes</b>
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100% of nine former landfills are free of contamination.	<i>% of nine former landfills fully monitored, characterized and remediated</i>	2001					
		2002	0%				
		2003	11%	1/9	11%	1/9	
		2004	11%	1/9	11%	1/9	11%
		2005	11%	1/9	11%	1/9	11%
		2006	11%	1/9			

Strategy Outcome	Measure	Year	Project	Mid Year	Actual	Notes
Albuquerque's groundwater is a usable water resource, free of contamination.	<i>GPPAP is implemented. 100% of outcome will take long period.</i>	2001				47 / 111 cases)
		2002	42%			47 / 111 cases)
	<i>% of groundwater cases in remediation.</i>	2003	tbd			
		2004	tbd		40%	includes LUSTs, Superfund and NMED-GW Bureau sites (68/170 cases)
		2005	tbd	tbd	tbd	Information is accessed through NMED.
		2006	tbd			

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**Goal: ENVIRONMENTAL PROTECTION AND ENHANCEMENT****Parent Program Strategy: ENVIRONMENTAL SERVICES****Department: ENVIRONMENTAL HEALTH****Service Activity: Environmental Protection****5640000*****Service Activity Purpose and Description***

Services Delivered: (Groundwater) Regional groundwater monitoring, including installation and monitoring of a regional network and other field support activities, data management and policy development; City fueling facility environmental compliance; liquid waste permitting.

(Landfill) Oversee landfill gas monitoring, characterization and, where necessary, remediation of landfill gas risk at former landfills to protect the public from risk of explosive conditions and exposure to toxic substances.

Customers/Clients: Current and future customers of the City's water utility and users of the groundwater resource; City Fleet Management and those who use the fueling facilities; owners of properties which require septic tanks. Property owners of land on or adjacent to former City landfills, those whose work locations are at and near former landfills, the Balloon Fiesta RV Park users, current and future customers of the City's water and solid waste utilities, Solid Waste Management Department, Planning Department, Public Works Department.

State of Customer Conditions: Groundwater contamination at former Los Angeles Landfill; 110 total cases of groundwater contamination in the Albuquerque area; City fleet fueling facilities are in compliance with New Mexico Underground Storage Tank Regulations. Safety risks from explosive concentrations of methane offsite at former Los Angeles Landfill have been reduced in shallow depths due to the landfill gas extraction system; deeper zones are continuing to be addressed; ESD landfill gas engineer reviews development plans to ensure landfill gas risks are addressed; process is underway to hire a contractor to characterize and assess landfill gas risk at other former City landfills; landfill gas contribution to groundwater contamination at former Los Angeles Landfill will be considered in design of groundwater remediation system. Customer conditions addressed: Los Angeles Landfill methane production and landfill gas characterization and assessment at other former City landfills.

***Changes and Key Initiatives***

Remediation of a groundwater contamination plume that is emanating from the former Los Angeles Landfill is required by New Mexico Water Quality Control Commission regulations. Construction of the system begins in January 2005 and will be operational in late Spring 2005.

Funding for additional O&M costs have been identified as a key budgetary need in FY06 and going forward.

***Input Measure (\$000's)***

2002	110	110 GENERAL FUND	758
2003	110	110 GENERAL FUND	781
2004	110	110 GENERAL FUND	740
2005	110	110 GENERAL FUND	896
2006	110	110 GENERAL FUND	860

***Strategic Accomplishments***

FY05: Construction of the Los Angeles Landfill groundwater remediation system is underway in compliance with State and Federal regulations and the Groundwater Protection Policy and Action Plan. System will be operational in late Spring 2005.

FY05: Explosive levels of methane near the surface around all boundaries of Los Angeles Landfill remain below explosive levels and under control with continued operation of a landfill gas extraction system. Plans are underway for a gas-to-energy system at the site. Landfill gas monitoring wells have been installed at South Eubank, San Antonio and South Yale landfills. Landfill gas migration is occurring at South Eubank and South Yale landfills. A renewable energy system option is under evaluation for South Eubank landfill, which would include landfill gas abatement measures.

FY05: The Environmental Compliance Program works to ensure compliance of City fueling facilities with the New Mexico Storage Tank regulations through monitoring, testing and a permitting process. City fueling facilities have been free of violations for over five years.

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<b><i>Output Measures</i></b>	<b><i>Year</i></b>	<b><i>Projected</i></b>	<b><i>Mid-Year</i></b>	<b><i>Actual</i></b>	<b><i>Notes</i></b>
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# of development projects reviewed for landfill gas safety measures	2001				
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# of development projects reviewed for landfill gas safety measures	2002	30		
# of development projects reviewed for landfill gas safety measures	2003	25	27	67
	2004	25	20	35
	2005	35	58	73
	2006	60		

<i>Output Measures</i>	<i>Year</i>	<i>Projected</i>	<i>Mid-Year</i>	<i>Actual</i>	<i>Notes</i>
# of former landfills surveyed	2001			2	
	2002	9			
# of former landfills surveyed	2003	9	9	9	
	2004	9	9	9	
	2005	9	9	9	
	2006	9			

<i>Output Measures</i>	<i>Year</i>	<i>Projected</i>	<i>Mid-Year</i>	<i>Actual</i>	<i>Notes</i>
# of groundwater sampling events	2001			172	
	2002	175			
# of groundwater sampling events	2003	130	58	140	
	2004	130	58	129	
	2005	130	60	106	
	2006	160			

<i>Output Measures</i>	<i>Year</i>	<i>Projected</i>	<i>Mid-Year</i>	<i>Actual</i>	<i>Notes</i>
# of landfill gas monitoring events - for explosive potential	2001			3,386	
	2002	3,175			
# of landfill gas monitoring events - for explosive potential	2003	2,450	1242	2411	
	2004	2,450	1192	2351	
	2005	2,400	1,122	2151	
	2006	2152			

<i>Output Measures</i>	<i>Year</i>	<i>Projected</i>	<i>Mid-Year</i>	<i>Actual</i>	<i>Notes</i>
% (and ratio) of former landfills where groundwater contamination is present and known to be traveling offsite. (Goal is 0%)	2001			33% 3/9	

% (and ratio) of former landfills where groundwater contamination is present and known to be traveling offsite. (Goal is 0%)	2002	33% 3/9			
% (and ratio) of former landfills where groundwater contamination is present and known to be traveling offsite. (Goal is 0%)	2003	33% 3/9	33% 3/9	33% 3/9	
	2004	33% 3/9	33% 3/9	33% 3/9	
	2005	33% 3/9	33% 3/9	33% 3/9	
	2006	33% 3/9			

<b>Quality Measures</b>	<b>Year</b>	<b>Projected</b>	<b>Mid-Year</b>	<b>Actual</b>	<b>Notes</b>
# of State for Federal environmental audit violations at City fueling facilities. (Goal is 0.)	2001			0	
# of State for Federal environmental audit violations at City fueling facilities. (Goal is 0.)	2002	0			
# of State for Federal environmental audit violations at City fueling facilities. (Goal is 0.)	2003	0	0	0	
	2004	0	0	0	
	2005	0	0	0	
	2006	0			

<b>Quality Measures</b>	<b>Year</b>	<b>Projected</b>	<b>Mid-Year</b>	<b>Actual</b>	<b>Notes</b>
% (and ratio) of 9 former landfills surveyed for explosion potential	2001			22% 2/9	33% 3 / 9 Possibly more, depending on progress of contractor, once hired
% (and ratio) of 9 former landfills surveyed for explosion potential	2002	100%			Ratio is 9/9
% (and ratio) of 9 former landfills surveyed for explosion potential	2003	100% 9/9	100% 9/9	100% 9/9	
	2004	100% 9/9	100% 9/9	100% 9/9	
	2005	100% 9/9	100% 9/9	100% 9/9	
	2006	100% 9/9			

<b>Quality Measures</b>	<b>Year</b>	<b>Projected</b>	<b>Mid-Year</b>	<b>Actual</b>	<b>Notes</b>
% (and ratio) of landfill groundwater monitoring events that meet drinking water standards. (Goal is 100%.)	2001			61% 58/95	64% 61 / 95

% (and ratio) of landfill groundwater monitoring events that meet drinking water standards. (Goal is 100%.)	2002	56%(52/92)				
% (and ratio) of landfill groundwater monitoring events that meet drinking water standards. (Long-term goal is 100%. Quarterly measures will vary significantly due to sampling at different locations.)	2003	50%	56% 24/43	57% 44/77	Long-term goal is 100%. Quarterly measures will vary significantly due to sampling at different locations.	
	2004	50%	56% 24/43	59% 50/85	Long-term goal is 100%. Quarterly measures will vary significantly due to sampling at different locations.	
	2005	59% 50/85	57% 27/47	58% 47/81		
	2006	30% 30/1000				

Quality Measures	Year	Projected	Mid-Year	Actual	Notes
% (and ration) of off site landfill gas monitoring events greater than 100% of the lower explosive limit at Los Angeles Landfill	2001			9%152/162 4	11% (155 / 1,416)
% (and ration) of off site landfill gas monitoring events greater than 100% of the lower explosive limit at Los Angeles Landfill	2002	6%			Ratio is 54/1129
% (and ratio) of off-site landfill gas monitoring events greater than 100% of the lower explosive limit at Los Angeles Landfill. (Goal is 0%.)	2003	6% 52/828	5% 28/608	8% 88/1121	
	2004	6% 52/828	5% 23/489	6.7% 64/951	
	2005	6.5% 64/984	2.6% 12/460	2.2% 19/877	
	2006	1.5% 13/876			

Quality Measures	Year	Projected	Mid-Year	Actual	Notes
% of new development projects at or near landfills reviewed for landfill gas safety. (Goal is 100%)	2001			100%	
% of new development projects at or near landfills reviewed for landfill gas safety. (Goal is 100%)	2002	100%			
% of new development projects at or near landfills reviewed for landfill gas safety. (Goal is 100%)	2003	100%	100%	90%	
	2004	100%	100%	100%	

2005	100%	98%	100%
2006	100%		

<i><b>Quality Measures</b></i>	<i><b>Year</b></i>	<i><b>Projected</b></i>	<i><b>Mid-Year</b></i>	<i><b>Actual</b></i>	<i><b>Notes</b></i>
% of the landfills where contamination is present that are monitored quarterly for groundwater contamination. (Goal is 100%)	2001			100%	
% of the landfills where contamination is present that are monitored quarterly for groundwater contamination. (Goal is 100%)	2002	33%			
% of the landfills where contamination is present that are monitored twice per year for groundwater contamination. (Goal is 100%)	2003	100%	33% 1/3	33% 1/3	
	2004	33%	33% 1/3	33% 1/3	
	2005	33% 1/3	33% 1/3	33% 1/3	
	2006	33%			

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**Goal:** ENVIRONMENTAL PROTECTION AND ENHANCEMENT

**Parent Program Strategy:** ENVIRONMENTAL SERVICES

**Department:** ENVIRONMENTAL HEALTH

**Service Activity:** Household Hazardous Waste Collection Center

5641000

***Service Activity Purpose and Description***

Services Delivered: Household hazardous waste collection center oversight and administration; used oil and antifreeze recycling; hazardous waste technical assistance.

Customers/Clients: Albuquerque citizens, specifically residents of City and County who seek advice on household hazardous waste and use the Household Hazardous Waste Collection Center (HHWCC), car owners and businesses that receive technical assistance; Solid Waste Management and Public Works Departments, Fire Marshal

State of Customer Conditions: Current funding allows the HHWCC to manage all household hazardous waste brought to the site by participants; used oil and antifreeze recycling is done through business partnerships; hazardous waste technical assistance is provided on request

Customer Conditions Addressed: providing a safe disposal method for household hazardous waste; helping to protect SWMD workers from unnecessary exposure to hazardous substances; minimal education of the public on waste minimization and reuse

***Changes and Key Initiatives***

Effective FY02, Household Hazardous Waste Collection Center is opened two additional days each week, for a total of four days (M,W,F,Sat.) Continue to provide the extended service and stay within budget.

FY05: To meet increased customer demand for Household Hazardous Waste Collection Center services, the City leadership and County Environmental Gross Receipts Tax Board approved increased funding for Center.

***Input Measure (\$000's)***

2002	110	110 GENERAL FUND	351
2003	110	110 GENERAL FUND	351
2004	110	110 GENERAL FUND	408
2005	110	110 GENERAL FUND	483
2006	110	110 GENERAL FUND	483

***Strategic Accomplishments***

Increased customer demand to use Household Hazardous Waste Collection Center service met through increased funding from City and County.

Environmental Health Department staff organize and convene an abandoned waste oil task force to address growing problem in community. Task force is made up of federal, state and local government representatives.

FY/02: Household hazardous waste separated from the solid waste stream at the Solid Waste convenience centers disposed at the HHWCC.

HHWCC is open four days a week (M,W,F, Sat.), an increase of two days per week.

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<b><i>Output Measures</i></b>	<b><i>Year</i></b>	<b><i>Projected</i></b>	<b><i>Mid-Year</i></b>	<b><i>Actual</i></b>	<b><i>Notes</i></b>
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# of HHWC participants	2001			4,750	
	2002	4,750			
# of HHWC participants					
# of HHWC participants	2003	4,750	2,810	5,577	
	2004	6,300	3,084	6,372	
	2005	6,300	3,244	6,597	
	2006	6,900			



<b>Output Measures</b>	<b>Year</b>	<b>Projected</b>	<b>Mid-Year</b>	<b>Actual</b>	<b>Notes</b>
Amount of household hazardous waste managed at City's Household Hazardous Waste Collection Center.	2001			272,800lbs	
Amount of household hazardous waste managed at City's Household Hazardous Waste Collection Center.	2002	330,053 lb			
Amount of household hazardous waste managed at City's Household Hazardous Waste Collection Center.	2003	250,000 lb	100,000 lb	200,000 lb	
	2004	250,000 lb	137,165 lb	242,475 lb	
	2005	250,000 lb	192,725	343,420	
	2006	360,000 lb			
<b>Quality Measures</b>	<b>Year</b>	<b>Projected</b>	<b>Mid-Year</b>	<b>Actual</b>	<b>Notes</b>
% of people using the Household Hazardous Waste Center who felt they were treated professionally	2001			99%	
% of people using the Household Hazardous Waste Center who felt they were treated professionally	2002	99%			
% of people using the Center who felt they were treated professionally.	2003	97%	97%	98%	
<b>Quality Measures</b>	<b>Year</b>	<b>Projected</b>	<b>Mid-Year</b>	<b>Actual</b>	<b>Notes</b>
Percentage of total waste that is reused and recycled	2001	86%		94.8%	Total waste: 272,874 reuse/recy: 258,604  FY98 81.5% FY99 86.3% FY00 85.2%
	2002	90%		83.8%	Total waste: 330,053 reuse/recy: 276,718
	2003	87%		92.1%	Total waste: 200,002 reuse/recy: 184,233
	2004	85%		88.7%	total waste: 242,475 reuse/recy: 215,031
	2005	88%		90.5%	
	2006	85%			